

**SYSTEM AND METHOD FOR INTEGRATION OF HfO₂
AND RTCVD POLY-SILICON**

ABSTRACT

[0038] A method for fabricating a portion of an integrated circuit on a semiconductor substrate. The method includes cleaning the surface of the substrate, and forming a thin insulate over the substrate. The method also includes depositing a high dielectric constant (high-k) material over the thin insulate, and then performing a hydrogen-based anneal on the high-k material. The method further includes performing an oxygen-based anneal on the high-k material, wherein the hydrogen-based and oxygen-based anneals occur sequentially.